

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/528,260B
Source: IFWO
Date Processed by STIC: 9/25/06

ENTERED



IFWO

RAW SEQUENCE LISTING

DATE: 09/25/2006

PATENT APPLICATION: US/10/528,260B

TIME: 15:10:49

Input Set : N:\AMC\Sequence Listing, P1983R1.txt

Output Set: N:\CRF4\09252006\J528260B.raw

3 <110> APPLICANT: Chiu, Henry
 4 Clark, Hilary
 5 Dennis, Kathryn
 6 Fong, Sherman
 7 Schoenfeld, Jill R.
 8 Wood, William I.
 9 Wu, Thomas D.
 11 <120> TITLE OF INVENTION: Compositions And Methods For Treating Immune Disorders
 13 <130> FILE REFERENCE: P1983R1
 15 <140> CURRENT APPLICATION NUMBER: US 10/528,260B
 16 <141> CURRENT FILING DATE: 2005-03-16
 18 <150> PRIOR APPLICATION NUMBER: US 60/411,392
 19 <151> PRIOR FILING DATE: 2002-09-16
 21 <150> PRIOR APPLICATION NUMBER: PCT/US03/029097
 22 <151> PRIOR FILING DATE: 2003-09-15
 24 <160> NUMBER OF SEQ ID NOS: 506
 26 <210> SEQ ID NO: 1
 27 <211> LENGTH: 972
 28 <212> TYPE: DNA
 29 <213> ORGANISM: Homo sapiens
 31 <400> SEQUENCE: 1
 32 ggcacgaggg taggcacttt agctcagtga tggattttaa gaacgattac 50
 34 acctgtcgcc tgtggtctga ctccaggcac tcgcgtcagg tacttctgct 100
 36 ccaggatagc tttatgaatt gctctgacag catcatcaat ggttcctttc 150
 38 gtgcgcttg ctttattcat gaggctcagg tcggggaaag actgatgggc 200
 40 cactgtgaca gcaagacagg taatgcaaat acggatttca tctgggtggg 250
 42 tccagataac agactgctag agccggataa agagatggaa aacttttacg 300
 44 tgtttcacaa tggaagtctg gttatagaaa gccctcgttt tgaggatgct 350
 46 ggagtgtatt cttgtatcgc aatgaataag caacgcctgt taaatgaaac 400
 48 tgtggacgtc acaataaatg tgagcaattt cactgtaagc agatcccatg 450
 50 ctcatgaggg atttaacaca gctttttacca ctcttgctgc ttgcgtggcc 500
 52 agtactgttt tggacttttt gtacctctat ctgactccat gccctgcaa 550
 54 gtgtaaaacc aagagacaga aaaatatgct acaccaaagc aatgccatt 600
 56 catcgattct cagtcctggc cccgctagtg atgcctccgc tgatgaacgg 650
 58 aaggcaggtg caggtaaaag agtgggtgtt ttggaacccc tgaaggatac 700
 60 tgcagcaggg cagaacggga aagtcaggct ctttcccagc gaggcagtga 750
 62 tagctgaggg catcctaaag tccacgaggg ggaaatctga ctcagattca 800
 64 gtcaattcag tgttttctga cacacctttt gtggcgctcca ctttaattgt 850
 66 gcctatatatt gtatgatgtc ataatttaat ctgttcatat ttaactttgt 900
 68 gtgtggtctg caaaataaac agcaggacag aaaaaaaaaa aaaaaaaaaa 950
 70 aaaaaaaaaa aaaaaaaaaa aa 972
 72 <210> SEQ ID NO: 2
 73 <211> LENGTH: 4573

RAW SEQUENCE LISTING

DATE: 09/25/2006

PATENT APPLICATION: US/10/528,260B

TIME: 15:10:49

Input Set : N:\AMC\Sequence Listing, P1983R1.txt

Output Set: N:\CRF4\09252006\J528260B.raw

74 <212> TYPE: DNA

75 <213> ORGANISM: Homo sapiens

77 <400> SEQUENCE: 2

```

78  cgcgtgtcta cgcggacgca cgggctaagc tgcttctgcc gccgccggcc 50
80  gcctgggacc ttgcggtgag gctgcgcggg gccgaggccg cctccgagcg 100
82  ccaggtttat tcagtcacca tgaagctgct gctgctgcac ccggccttcc 150
84  agagctgcct cctgctgacc ctgcttggct tatggagaac caccctgag 200
86  gctcacgctt catccctggg tgcaccagct atcagcgtg cctccttcc 250
88  gcaggatcta atacatcggt atggcgaggg tgacagcctc actctgcagc 300
90  agctgaaggc cctgctcaac cacctggatg tgggagtggg ccggggtaat 350
92  gtcacccagc acgtgcaagg acacaggaac ctctccacgt gctttagtgc 400
94  tggagacctc ttcactgccc acaatttcag cgagcagtcg cggattggga 450
96  gcagcgagct ccaggagtgc tgccccacca tctccagca gctggattcc 500
98  cgggcctgca cctcggagaa ccaggaaaac gaggagaatg agcagacgga 550
100 ggagggggcgg ccaagcgtg ttgaagtgtg gggatacggc ctctctgtg 600
102 tgaccgtcat ctccctctgc tccctcctgg gggccagcgt ggtgcccttc 650
104 atgaagaaga ccttttacia gaggtgctg ctctacttca tagctctggc 700
106 gatttgaacc ctctactcca acgcccctct ccagctcatc ccggaggcat 750
108 ttggtttcaa ccctctggaa gattattatg tctccaagtc tgcagtgggtg 800
110 tttgggggct tttatctttt ctttttcaca gagaagatct tgaagattct 850
112 tcttaagcag aaaaatgagc atcatcatgg acacagccat tatgcctctg 900
114 agtcgcttcc ctccaagaag gaccaggagg agggggtgat ggagaagctg 950
116 cagaacgggg acctggacca catgattcct cagcactgca gcagtgagct 1000
118 ggacggcaag gcgcccattg tggacgagaa ggtcattgtg ggctcgctct 1050
120 ctgtgcagga cctgcaggct tcccagagtg cttgctactg gctgaaagg 1100
122 gtccgctact ctgatatcgg cactctggcc tggatgatca ctctgagcga 1150
124 cggcctccac aatttcacg atggcctggc catcggtgct tccctcactg 1200
126 tgtcagtttt ccaaggcatc agcacctcgg tggccatcct ctgtgaggag 1250
128 tcccacatg agctaggaga ctttgtcatc ctgctcaacg ctgggatgag 1300
130 catccaacaa gctctcttct tcaacttctt ttctgcctgc tgcgtgctacc 1350
132 tgggtctggc ctttggcatc ctggccggca gccacttctc tgccaactgg 1400
134 atttttgcgc tagctggagg aatgttcttg tatatttctc tggctgatat 1450
136 gttccctgag atgaatgagg tctgtcaaga ggatgaaagg aagggcagca 1500
138 tcttgattcc atttatcatc cagaacctgg gcctcctgac tggattcacc 1550
140 atcatggtgg tctcaccat gtattcagga cagatccaga ttgggtaggg 1600
142 ctctgccaaag agcctgtggg actggaagtc gggccctggg ctgcccgatc 1650
144 gccagcccgga ggacttacca tccacaatgc accacggaag aggccttct 1700
146 atgaaaaact gacacagact gtattcctgc attcaaagt cagccgtttg 1750
148 taaaatgctg taccctagga ataagctgcc ctggttaacca gtctctagct 1800
150 agtgccctct gccctctcct cacctccttt tctctcagtg actctggaac 1850
152 ctgaatgcag cttacaagac aagcctgact tttttctctg attaccttg 1900
154 cctcctcttg gaaccagtgc tgaagggttt tgaatccttt acccaacaat 1950
156 gcaaaaatag agccaatggg tataacttgg ctagaaatat caagagttga 2000
158 atccatagtg tggggcccat gactctagct gggcaccttg gacctccagc 2050
160 tggccaatag aagagacagg agacaggaag ccttccatt ttttcaaagt 2100
162 ctgtttaatt gcctattact tctctcaaag agaacctgaa gtcagaacac 2150
164 atgagcaggg tgagaggtga ggcaaggttc atcctgaatg ggagaggaag 2200
166 tcgaaccact gctgtgtgtc ttgtcaggat gctcacttgt tctactgag 2250
168 atgctggata ttgattttgt aacagcacct ggtgtttcac ggctgtccga 2300

```

RAW SEQUENCE LISTING

DATE: 09/25/2006

PATENT APPLICATION: US/10/528,260B

TIME: 15:10:49

Input Set : N:\AMC\Sequence Listing, P1983R1.txt

Output Set: N:\CRF4\09252006\J528260B.raw

```

170 gtgagctaac gtggcggtgt ggctgcctgg acctcctctt tcagggttaac 2350
172 gctgacagaa tggaggctca ggctgtctgc aagaaaacag ttggtttggc 2400
174 tgtgattttg acctcctctt cccactgcc atcttctaag agactttgta 2450
176 gctgcctcct agaagcacat tctgagcaca tttgagacct ctgtgttaga 2500
178 ggggagactg cacaactat cctccccag gttgagacgt ctgcagagtg 2550
180 gcaagctgac ttgtagaaat ggggtgccat ttatgctcta cttagacaag 2600
182 ggtaatcaga aatggaatca gtgcaggcaa aatttaggat ttgccgcttc 2650
184 cataaatcaa agcatgacta atagggggtc tctgaaatgt aagggcacia 2700
186 acttcactta gggcatcgca gatgtttgca gaatggttgg cctaattgatt 2750
188 atgctacaga tgggttttaa atgaccgctc taggttactg cttccttgca 2800
190 aaaaaagtgc aatcctgcat tgaattgaat atgaatttct ctaactctct 2850
192 ccagaaaatg gatggagata acttgctctt aaaactgtag gccagcctta 2900
194 gccactgtgg agcccttgcc tccgagctct ggcttcaagg ggagctcttc 2950
196 tccaggttca ctagggtgaat tgatttatta ttatcatatt gataatgtga 3000
198 gattcttttag ccactttggg gagcctgtct ctccagaagc ctttcttagt 3050
200 ggtgccacac gttggagccc agggggccatg tttgcaaact gattcatgtg 3100
202 catggctgac aggagtactg gttcactacc aatgcctgag cttttctctt 3150
204 acatagaaaa actgtccact ctacagtaatc acaagcagca tccgttttgt 3200
206 tttctcttct tgggagacat ctgtcaaacc aggaatattc ttgaaaagaa 3250
208 cgtgagcagg aaaaactgct ggtgatactt tttttaagtt ttgtttttat 3300
210 cttgcctggt ggcttcaata catttgagaa tacgctgaag agggaaaatt 3350
212 tcagtgatgg agattctaga ttaaataatc ggactgattt cctgggtgga 3400
214 ttatgggtcca gttttaccaa agaaccaatt ccttgaatgt tggaaatctaa 3450
216 cttttttatat tgtcattatt attgttgttt ttaaacggtt ctttgtcttt 3500
218 tctgttttat ttttctcaag ctgctttcag gagctagcag aaaataactc 3550
220 aaagttgaag actctggaag attttgcttt aacctactc gcattgatgt 3600
222 attaaattta taatttttagc attcccaata gatcctatca ttccttaaac 3650
224 ataataccct ttgtcttgga gtagaatact aagttagagt tagtggtatt 3700
226 ctagtttagg agaggagctc aaaactataa tctttaacaa attgaaaaat 3750
228 gaaatagggt gttttccctt tttgtgcaca cctatattac cttagaaat 3800
230 ttccttccat agacagctgc ctcaaaggga aatcctctt aaaccgtagt 3850
232 tggcgagag gtcagtccta gtcggagctt aggaggggag gagacgctca 3900
234 catcgtctga cttgagtcgc cactgattgt ggcaacagct ttgcctcatg 3950
236 agtcaaaaat tggcaatttc ttttgatttt tagttgttga atttgctgtt 4000
238 tcaagcattt gtacatatta gaagtctaag gagtagcaag tcagtgggag 4050
240 gactttttca ccctggcat tagcagcttc gacctcattt tccagatgca 4100
242 ccagctccta ttaataagtt agcaaggaaa gtgtatgtca cgtgcaggaa 4150
244 cagtgaggca gggacagggg ttctgctcct tctcacttca ccaccggcac 4200
246 acagcttgcc cctgtctttg ccccaaagg tattttgtgt ctagtgtcaa 4250
248 attggagcta ttcttactg gtccttaacc ttgggtttta aaaagaaggc 4300
250 ttctctgttt gggtagcgta agagctgagt atagtaagtc ctcttccaaa 4350
252 gagatggcaa tatgctgggc atctacttta aaacaaagtt gtctgatttt 4400
254 tgcaagagag gttaggattt tattgttctt atttcccttt acagttctgc 4450
256 agttccatca cagtattttt ttaaataact caggtgtatg agcagaaatt 4500
258 agaaaagaaa attaacttat gtggactgta aatgttttat ttgtaagatt 4550
260 ctataaataa agctatattc tgt 4573
262 <210> SEQ ID NO: 3
263 <211> LENGTH: 531
264 <212> TYPE: PRT

```

RAW SEQUENCE LISTING

DATE: 09/25/2006

PATENT APPLICATION: US/10/528,260B

TIME: 15:10:49

Input Set : N:\AMC\Sequence Listing, P1983R1.txt

Output Set: N:\CRF4\09252006\J528260B.raw

```

265 <213> ORGANISM: Homo sapiens
267 <400> SEQUENCE: 3
268 Arg Val Tyr Ala Asp Ala Pro Ala Lys Leu Leu Leu Pro Pro Pro
269      1      5      10      15
271 Ala Ala Trp Asp Leu Ala Val Arg Leu Arg Gly Ala Glu Ala Ala
272      20      25      30
274 Ser Glu Arg Gln Val Tyr Ser Val Thr Met Lys Leu Leu Leu Leu
275      35      40      45
277 His Pro Ala Phe Gln Ser Cys Leu Leu Leu Thr Leu Leu Gly Leu
278      50      55      60
280 Trp Arg Thr Thr Pro Glu Ala His Ala Ser Ser Leu Gly Ala Pro
281      65      70      75
283 Ala Ile Ser Ala Ala Ser Phe Leu Gln Asp Leu Ile His Arg Tyr
284      80      85      90
286 Gly Glu Gly Asp Ser Leu Thr Leu Gln Gln Leu Lys Ala Leu Leu
287      95     100     105
289 Asn His Leu Asp Val Gly Val Gly Arg Gly Asn Val Thr Gln His
290     110     115     120
292 Val Gln Gly His Arg Asn Leu Ser Thr Cys Phe Ser Ser Gly Asp
293     125     130     135
295 Leu Phe Thr Ala His Asn Phe Ser Glu Gln Ser Arg Ile Gly Ser
296     140     145     150
298 Ser Glu Leu Gln Glu Phe Cys Pro Thr Ile Leu Gln Gln Leu Asp
299     155     160     165
301 Ser Arg Ala Cys Thr Ser Glu Asn Gln Glu Asn Glu Glu Asn Glu
302     170     175     180
304 Gln Thr Glu Glu Gly Arg Pro Ser Ala Val Glu Val Trp Gly Tyr
305     185     190     195
307 Gly Leu Leu Cys Val Thr Val Ile Ser Leu Cys Ser Leu Leu Gly
308     200     205     210
310 Ala Ser Val Val Pro Phe Met Lys Lys Thr Phe Tyr Lys Arg Leu
311     215     220     225
313 Leu Leu Tyr Phe Ile Ala Leu Ala Ile Gly Thr Leu Tyr Ser Asn
314     230     235     240
316 Ala Leu Phe Gln Leu Ile Pro Glu Ala Phe Gly Phe Asn Pro Leu
317     245     250     255
319 Glu Asp Tyr Tyr Val Ser Lys Ser Ala Val Val Phe Gly Gly Phe
320     260     265     270
322 Tyr Leu Phe Phe Phe Thr Glu Lys Ile Leu Lys Ile Leu Leu Lys
323     275     280     285
325 Gln Lys Asn Glu His His His Gly His Ser His Tyr Ala Ser Glu
326     290     295     300
328 Ser Leu Pro Ser Lys Lys Asp Gln Glu Glu Gly Val Met Glu Lys
329     305     310     315
331 Leu Gln Asn Gly Asp Leu Asp His Met Ile Pro Gln His Cys Ser
332     320     325     330
334 Ser Glu Leu Asp Gly Lys Ala Pro Met Val Asp Glu Lys Val Ile
335     335     340     345
337 Val Gly Ser Leu Ser Val Gln Asp Leu Gln Ala Ser Gln Ser Ala

```

RAW SEQUENCE LISTING

DATE: 09/25/2006

PATENT APPLICATION: US/10/528,260B

TIME: 15:10:49

Input Set : N:\AMC\Sequence Listing, P1983R1.txt

Output Set: N:\CRF4\09252006\J528260B.raw

```

338          350          355          360
340 Cys Tyr Trp Leu Lys Gly Val Arg Tyr Ser Asp Ile Gly Thr Leu
341          365          370          375
343 Ala Trp Met Ile Thr Leu Ser Asp Gly Leu His Asn Phe Ile Asp
344          380          385          390
346 Gly Leu Ala Ile Gly Ala Ser Phe Thr Val Ser Val Phe Gln Gly
347          395          400          405
349 Ile Ser Thr Ser Val Ala Ile Leu Cys Glu Glu Phe Pro His Glu
350          410          415          420
352 Leu Gly Asp Phe Val Ile Leu Leu Asn Ala Gly Met Ser Ile Gln
353          425          430          435
355 Gln Ala Leu Phe Phe Asn Phe Leu Ser Ala Cys Cys Cys Tyr Leu
356          440          445          450
358 Gly Leu Ala Phe Gly Ile Leu Ala Gly Ser His Phe Ser Ala Asn
359          455          460          465
361 Trp Ile Phe Ala Leu Ala Gly Gly Met Phe Leu Tyr Ile Ser Leu
362          470          475          480
364 Ala Asp Met Phe Pro Glu Met Asn Glu Val Cys Gln Glu Asp Glu
365          485          490          495
367 Arg Lys Gly Ser Ile Leu Ile Pro Phe Ile Ile Gln Asn Leu Gly
368          500          505          510
370 Leu Leu Thr Gly Phe Thr Ile Met Val Val Leu Thr Met Tyr Ser
371          515          520          525
373 Gly Gln Ile Gln Ile Gly
374          530

```

376 <210> SEQ ID NO: 4

377 <211> LENGTH: 2181

378 <212> TYPE: DNA

379 <213> ORGANISM: Homo sapiens

381 <400> SEQUENCE: 4

```

382 ggcacgaggg atgcaaggag atgagacagt tagatttact tcctcttttc 50
384 taatctgaga ggtttcatgt tgaagaaaat cagtgttggg gttgcaggag 100
386 acctaaacac agtcaccatg aagctgggct gtgtcctcat ggctggggcc 150
388 ctctaccttt cccttggtgt gctctgggtg gccagatgc tactggctgc 200
390 cagttttgag acgctgcagt gtgagggacc tgtctgcact gaggagagca 250
392 gctgccacac ggaggatgac ttgactgatg caagggaagc tggcttccag 300
394 gtcaaggcct acactttcag tgaacccttc cacctgattg tgcctatga 350
396 ctggctgatc ctccaaggtc cagccaagcc agtttttgaa ggggacctgc 400
398 tggttctgcg ctgccaggcc tggcaagact ggcactgac tcaggtgacc 450
400 ttctaccgag atggctcagc tctgggtccc cccgggccta acagggaatt 500
402 ctccatcacc gtggtacaaa aggagacag cgggcactac cactgcagtg 550
404 gcatcttcca gagccctggt cctgggatcc cagaaacagc atctgttggtg 600
406 gctatcacag tccaagaact gtttccagcg ccaattctca gagctgtacc 650
408 ctgagctgaa cccaagcag gaagcccat gacctgagt tgtcagacaa 700
410 agttgcccc ctgagaggtca gctgcccgcc tcctcttctc cttctacaag 750
412 gatggaagga tagtgcaaag cagggggctc tcctcagaat tccagatccc 800
414 cacagcttca gaagatcact ccgggtcata ctggtgtgag gcagccactg 850
416 aggacaacca agtttgaaa cagagcccc agctagagat cagagtgcag 900
418 ggtgcttcca gctctgctgc acctccaca ttgaatccag ctctcagaa 950

```

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/528,260B

DATE: 09/25/2006
TIME: 15:10:50

Input Set : N:\AMC\Sequence Listing, P1983R1.txt
Output Set: N:\CRF4\09252006\J528260B.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:199; Xaa Pos. 17
Seq#:212; N Pos. 1358
Seq#:224; N Pos. 149,164
Seq#:234; N Pos. 422,847,856,872
Seq#:273; N Pos. 2530
Seq#:313; N Pos. 2741
Seq#:314; Xaa Pos. 910
Seq#:322; N Pos. 124
Seq#:383; Xaa Pos. 327
Seq#:400; N Pos. 37
Seq#:401; N Pos. 779
Seq#:406; N Pos. 20,42,49,791,822,837
Seq#:409; N Pos. 475,489
Seq#:469; N Pos. 1973,1984,2116,2119,2120,2121,2134,2160,2180,3170,3172
Seq#:469; N Pos. 3198,3209,3210,3211
Seq#:471; N Pos. 38,64
Seq#:472; Xaa Pos. 13,22

VERIFICATION SUMMARY

DATE: 09/25/2006

PATENT APPLICATION: US/10/528,260B

TIME: 15:10:50

Input Set : N:\AMC\Sequence Listing, P1983R1.txt

Output Set: N:\CRF4\09252006\J528260B.raw

L:20650 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:199 after pos.:15
L:22238 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:212 after pos.:1350
L:23594 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:224 after pos.:100
M:341 Repeated in SeqNo=224
L:24174 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:234 after pos.:400
M:341 Repeated in SeqNo=234
L:27777 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:273 after pos.:2500
L:33358 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:313 after pos.:2700
L:33579 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:314 after pos.:900
L:34733 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:322 after pos.:100
L:40726 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:383 after pos.:315
L:42335 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:400 after pos.:0
L:42402 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:401 after pos.:750
L:42816 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:406 after pos.:0
M:341 Repeated in SeqNo=406
L:42959 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:409 after pos.:450
L:50421 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:469 after pos.:1950
M:341 Repeated in SeqNo=469
L:50750 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:471 after pos.:0
M:341 Repeated in SeqNo=471
L:51057 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:472 after pos.:0
M:341 Repeated in SeqNo=472